Supporting Statement for Paperwork Reduction Act Submission
Sandhill Crane Harvest Survey
OMB Control Number 1018-0023

Section A. Justification

1. Explain why you need to collect this information. Identify any legal or administrative requirements that necessitate this information collection.

Cooperative management guidelines for mid-continent sandhill cranes (included are three currently recognized subspecies: lesser, Grus canadensis canadensis, Canadian, G. c. rowani, and greater, G. c. tabida) are aimed at providing optimum diverse recreational opportunity consistent with the welfare of the species and within the provisions of international treaties and socio-economic constraints. Under requirements of the Migratory Bird Treaty Act (16 U.S.C. 703-712) and the Fish and Wildlife Act of 1956 (16 U.S.C. 742d), the Department of the Interior is designated as a key agency responsible for the wise management of migratory bird populations frequenting the U.S. and for the setting of hunting regulations that allow appropriate harvests that are within the guidelines that will allow for the populations' well-being. These responsibilities dictate the gathering of accurate data on various characteristics of migratory bird harvests of a temporal and geographic nature. Knowledge attained by determining harvest and harvest rate of cranes is used to regulate populations (to promulgate hunting regulations) and to encourage hunting opportunity, especially where crop depredations are chronic and/or lightly harvested flocks occur.

Beginning in 1960 and continuing to date, hunting seasons have been allowed for sandhill cranes in all or part of eight Midwestern States (Colorado, Montana, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming) during specified time periods. In addition, a sandhill crane hunting season has been allowed in Kansas since 1993. Prior to the initiation of the sandhill crane harvest questionnaire in 1975, little information was available on the number of individuals who annually hunt sandhill cranes or the number of cranes harvested. This lack of information represented one of the major voids in management of the species. Annual crane hunter activity and harvest information were readily available for Canada through uniform nationwide surveys conducted by the Canadian Federal Government. Lack of comparable information from the United States precluded ascertaining the total annual hunter harvest from this migratory bird resource shared by the two countries.

2. Explain how FWS will use the information. If this is not a new collection, explain how FWS has used the information received.

Since initiation of the questionnaire survey, it has been possible to annually estimate the magnitude, geographical distribution, and temporal distribution of the sandhill crane harvest. It has also been possible for us to estimate the portion of the sandhill crane's total population that is taken during harvest. This information has been particularly

useful in determining the effects on harvests of daily bag limits and changes in hunting dates and the areas (counties) of States open to hunting. Based on information from the U.S. and Canadian surveys, hunting regulations can be adjusted as needed to optimize harvest at levels that provide a maximum of hunting recreation while keeping populations at desired levels. Agencies participating in determining appropriate sandhill crane hunting regulations, and making use of survey results, include the Department of the Interior, the Canadian Wildlife Service, State conservation agencies, and various private conservation organizations.

3. Does this information collection use automated, electronic, mechanical, or other technological techniques? Provide reasons for the decision to adopt this means of collection. Describe any consideration you gave to using information technology to reduce burden on the public.

Respondents are randomly selected migratory bird hunters who are asked to voluntarily participate in a season-long survey. If we put the season-long survey forms online, we might receive responses from people who were not randomly selected for the survey. This would invalidate (i.e., bias) our survey results and complicate our efforts to obtain reliable harvest information to use in setting sandhill crane hunting regulations. Thus, this information collection does not involve the use of technological collection techniques at this time. However, as new electronic survey methodologies are developed and tested, we will strongly consider any that are appropriate for this survey. The burden currently placed on cooperators and the cost to the Federal government is thought to be at a minimum level consistent with the information required.

4. Describe efforts to avoid duplication. Show why similar information already available cannot be used or modified.

As a result of close cooperation and frequent meetings between the Department of the Interior and conservation agencies in States with crane seasons, potential duplications in data collection are discussed and avoided. No other harvest survey provides uniform information on sandhill crane hunting activity and harvest. Some States conduct surveys providing some of this information; however, the data are not comparable among States and therefore not additive. Other States have no crane harvest information whatsoever.

5. If the collection will have a significant impact on small entities, such as businesses, describe methods used to minimize burden on them.

This collection does not significantly impact small entities. The brief survey is completed voluntarily by individual hunters.

6. Describe the consequences to Federal programs or policies if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to

reducing burden.

If the survey was not conducted, an adequate data base would not be available for making decisions of a regulatory nature. Not having this ability could adversely affect crane populations due to over-harvest. In addition, crane harvests that are not adjusted yearly could possibly cause an under-harvest situation which, in turn, could cause crop depredation on private land. The health and well-being of the population demand that harvests be commensurate with population size. Finally, if this survey was not conducted, the lack of an accurate assessment of harvest would logically dictate restrictive regulations, with a loss in hunting recreation due to only vague knowledge of effects of hunting on crane populations and fear of possible over-harvest.

Because the sandhill crane harvest can vary considerably from year to year depending on weather, water conditions, food availability, and reproductive success, it is necessary to collect harvest information on an annual basis. Harvest can vary by as much as 100% by State from year-to-year (see attached report). The harvest is such that the annual take is fairly close to the recommended level, which dictates an annual scrutiny as to whether additional hunting opportunity should be allowed. The annual harvest recommendation will be based on the previous year's harvest, therefore it behooves us to conduct the survey on an annual basis.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

There are no special circumstances that require the collection to be conducted in this manner.

8. Cite and provide a copy of the 60-day Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received on the 60-day notice, and describe actions taken by FWS in response to those comments. Specifically address comments received on cost and hour burden. Describe your efforts to consults with persons outside of FWS to obtain their views on the availability of data; frequency of collection; clarity of instructions, disclosure, or reporting format; and data elements to be recorded, disclosed, or reported. Consultation should include obtaining their views on the amount of burden to be imposed and ways to minimize the burden. If circumstances prevent this consultation, describe them.

On November 19, 2002, we published in the **Federal Register** (67 FR 69756) a notice soliciting public comment on this information collection for 60 days, ending January 21, 2003. By that date, we did not receive any comments in response to the notice.

Through regular meetings between the Department of the Interior and the Technical Committee of the Central Flyway Council, an organization of wildlife conservation

professionals from States making up the Flyway, data collection needs and procedures are fully discussed and agreed upon. Below are the representatives consulted in 2002 from States having a crane hunting season:

Jim Gammonly, Colorado Division of Wildlife	970/484-2836
Helen Hands, Kansas Department of Wildlife & Parks	316/793-3066
Jim Hansen, Montana Department of Fish, Wildlife, & Parks	406/247-2957
Tim Mitchusson, New Mexico Department Game & Fish	505/835-0900
Stan C. Kohn, North Dakota Game & Fish Department	701/328-6339
Michael E. O'Melia, Oklahoma Department of Wildlife Conservation	405/521-3563
Spencer Vaa, South Dakota Game, Fish, & Parks Department	605/688-4786
Jay Roberson, Texas Parks & Wildlife Department	512/389-8011
Larry Roberts, Wyoming Game & Fish Department	307/473-3412

9. Explain any decision to provide a gift or payment to respondents, other than remuneration of contractors and grantees.

No payments or gifts are provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or policy.

Each hunter contacted receives an assurance that the survey is conducted in accordance with the Privacy Act of 1974. Hunters are not asked to write their names on the questionnaires and are assured that neither their names nor any other unique personal identifiers will be associated with their questionnaires.

11. Provide justification for any questions of a sensitive nature. Include the reasons why the questions are necessary, the specific uses for the information, the explanation given to respondents, and steps taken to obtain respondents' consent.

The survey contains no questions of a sensitive nature.

12. Provide estimates of the hour burden of the information collection. Include an estimate of the dollar value of the burden hours.

Recent Service experience indicates that about 6,500 hunters will respond to the questionnaire each year. This is a decrease of 900 respondents for this information collection over the number estimated in the current information collection budget. The frequency of response is once annually. It will take an average of 5 minutes (0.083 hours) for a respondent to fill out the questionnaire. Thus, the total annual burden estimate for this survey is 540 hours. Assuming an hourly cost of $8.00, this amounts to a total dollar value of the annual burden hours of $4,320.

Number of respondents	Number of responses annually	Average time required per response	Total annual burden hours	Total annual dollar value of burden hours (@ $8.00/hour)
6,500	1	5 minutes	540 hours	$4,320

13. Provide an estimate for the total annual non-hour dollar cost burden to respondents or recordkeepers. Do not include the cost of burden hours described in items 12 and 14.

There is no non-hour dollar cost burden to respondents.

14. Provide estimates of the annual cost to the Federal Government. Include a description of the method used to estimate cost, which should include quantification of hours, operational expenses, and any other expense that would not have been incurred without this information collection.

The estimated total annual cost to the Federal Government is $44,900, as detailed below. Estimates are based on current experience with the survey.

Activity	Hours required	Total cost of activity
Coordination with State agencies	4	$100
Preparation of justification and securing clearance	12	$300
Printing survey forms (contracted)	0	$4,000
Mail costs, distributing forms, postage (contracted)	0	$6,500
Coding and keypunching of name/addresses and questionnaires	100	$22,000
Computer (hardware) costs and programming	5	$6,500
Analysis of data and report preparation (partially contracted)	20	$5,500
TOTALS	141	$44,900

15. Provide the reasons for any program changes or adjustments reported in items 13 or 14 of OMB 83-I.

The reduction in the hour burden estimate is the result of small reductions in sampling rates for some States.

In the last submission to OMB, the Service requested approval to replace the current sandhill crane harvest questionnaire form (Form Number 3-530) and follow-up questionnaire form (Form Number 3-530A) with a new, machine-scannable sandhill crane harvest survey form (Form Number 3-2056N). The new survey form design consists of a personalized cover letter that is signed by the Chief of the Division of Migratory Bird Management and attached to the survey form. The cover letter, survey form, and a postage-paid return envelope are mailed in an envelope bearing the Service's logo, rather than the mailer format that the current questionnaire form employs. The personalized cover letter, the postage-paid return envelope, and the Service logo on the mailing envelope are all designed to improve response rates.

We are again requesting approval to use the new Form 3-2056N concurrently with Forms 3-530 and 3-530A because we were unable to conduct the planned comparison of forms. We plan to use the current and the new forms concurrently for two years to enable us to compare results obtained from the two different formats. For this comparison, half of the sampled hunters will receive Form Numbers 3-530 and 3-530A, and the other half will receive Form Number 3-2056N in selected States. We will not increase the number of hunters that we contact annually, and Form Number 3-2056N asks for the same information as Forms 3-530 and 3-530A. Thus, neither the two-year comparison period nor the subsequent change to the new form will result in any additional increase in burden hours.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Participating States issue permits to sandhill crane hunters in mid-July. Copies of issued permits (showing names and addresses of permittees) are mailed to the Division of Migratory Bird Management, Laurel, Maryland, following the end of the crane hunting season in each State. Upon receipt of name and address cards, computer records of each name/address are produced, and data-mailers containing the questionnaire are computer-addressed and mailed. These questionnaires are mailed to permittees approximately five weeks after the close of the respective hunting season. A follow-up questionnaire is mailed to nonrespondents approximately one month later. In recent years, the latest crane season has closed in early February. Thus distribution of follow-up forms is completed in early April and the analysis of data commences about early May. An annual report is available by July.

17. If seeking approval not to display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

We will display the expiration date for OMB approval on the survey forms.

18. Explain each exception to the certification statement identified in item 19 of OMB 83-I.

There are no exceptions to the certification statement.

Section B. Collections of Information Employing Statistical Methods

1. Provide a table with numerical estimates of the potential respondent universe and any sampling or other respondent selection methods to be used. Indicate expected response rates for the collection as a whole. If the collection has been conducted previously, include the actual response rate achieved during the last collection.

The sampling universe may vary from year to year. However, the following 2001-02 information is provided.

The universe for sampling is approximately 67,500 individuals who obtain an annual permit to hunt sandhill cranes. Sampling is according to States, with 15% of the permittees randomly selected to receive questionnaires in Texas, 20% of the permittees selected in Colorado and North Dakota, and 50% of the permittees contacted in all other States except Montana and Wyoming. All permittees in Montana and Wyoming are contacted because of the low number of permits issued in those States. Below are data from the 2001-02 survey giving pertinent sampling characteristics by State:

State	Number of permittees	Number contacted	Number of responses
Colorado	5,869	1,125	757
Kansas	1,374	673	449
Montana	253	247	208
New Mexico	509	245	123
North Dakota	8,078	1,600	1,163
Oklahoma	1,315	645	427
South Dakota	680	335	287
Texas	49,410	6,292	3,000
Wyoming	72	72	59

Total	67,560	11,234	6,473

Response rates for most States were 65-85%, but the Texas response rate was only 48%. Annual response rates for Texas had been about 57% until 1997, but the Texas Parks and Wildlife Department (TPWD) changed its method of issuing sandhill crane permits that year. The crane permit was incorporated into TPWD's new electronic licensing system, so it was issued by hunting license vendors rather than by TPWD personnel as it had been prior to 1997. Apparently some license vendors include the free crane permit with many of the hunting licenses they sell even when license purchasers do not request the permit. As a result, the number of sandhill crane permits issued in Texas has increased markedly since TPWD implemented the electronic licensing system, from 11,334 in 1996 (the last year before the system change) to 49,410 in 2001. The additional permittees are people who do not hunt sandhill cranes, and people who do not hunt cranes have lower response rates than people who do hunt cranes. Thus, Texas response rates have decreased since TPWD's system change. Because more than half of the total 2001 survey sample was allocated to Texas permittees, the overall response rate was just 57.6%.

2. Describe the procedures for the collection of information. Include statistical methodology, estimation procedure, degree of accuracy needed for the purpose described in the justification, unusual problems requiring specialized sampling procedures, and use of periodic (less frequent than annual) data collection cycles to reduce burden.

Sampling is stratified according to State of permit issuance; sampling rates vary from 15% in States with many crane permittees (Texas, North Dakota) to 100% in States with few crane permittees (e.g., Montana, Wyoming). No specialized sampling procedures are required, and we use the standard estimation methods for stratified random samples. Stratum-specific (State-specific) estimates of the proportion of permittees that actually hunted cranes, the mean number of days hunted, and the mean number of cranes harvested are derived from the responses. Those estimates are expanded by N (number of permits issued) for each State to obtain State totals, which are then combined to provide estimates of the number of active crane hunters, days of hunting, and cranes harvested for all mid-continent sandhill crane hunting in the U.S. The 95% confidence interval for the annual harvest estimate is about $\pm$5%, which is a precision level that is adequate to ensure responsible harvest management (i.e., hunting regulations) decisions.

3. Describe methods to maximize response rates and deal with issues of nonresponse.

Questionnaires are postage-paid. To increase response rates, a follow-up questionnaire is mailed those hunters who did not respond to the first questionnaire.

Regarding the Texas response rate: The Texas response rate was stable from year to

year prior to 1997, at about 57%, and so was the fraction of Texas respondents that were active sandhill crane hunters. Assuming that active hunters still respond at the same rate, we conclude that the decline in overall response rate is due to fewer responses from people who did not hunt cranes. Therefore, we apply the number of active crane hunter respondents to an expected response rate of 57% (rather than the realized response rate of 48% for 2001), and calculate the number of non-hunters expected to respond under pre-1997 conditions. In effect, this deflates the hunter activity and harvest estimates to account for the decrease in response by non-hunters that occurred after many more non-hunters were included in the sample frame. The following example shows how we used this method to adjust the 2001 Texas estimates for the additional nonresponse bias caused by an inflated sample frame.

There were 49,410 Texas sandhill crane permittees, of which we sampled 6,292 and received 3,000 responses (47.7% response rate). Of those 3,000 respondents, 258 (8.6%) were active crane hunters. In a normal analysis, we would estimate that 8.6% of the 49,410 permittees (or 4,249 people) were active crane hunters. Instead, however, we artificially "correct" the response rate to 57%, the pre-1997 rate. That would yield 3,586 responses instead of 3,000. Furthermore, since active hunters should still be responding at pre-1997 rates, we still expect the same 258 responses from active hunters because the number of active hunters in the original sample of 6,292 permittees has not changed. So, now we have an adjusted estimate of 258/3,586 = 7.2% active hunters. Applying that estimate to the total number of permittees gives an adjusted estimate of 3,554 active crane hunters (7.2% of 49,410). Thus our adjusted estimate of active hunters is lower than the unadjusted estimate, and our adjusted estimates of days hunted and cranes harvested are also lower.

4. Describe any tests of procedures or methods to be undertaken.

No additional testing of procedures is planned.

5. Provide the names and telephone numbers of individuals consulted on the statistical aspects of the design and the names of the FWS unit, contractor(s), grantee(s), or other person(s) who will actually collect or analyze the information.

The individual directly responsible for information collection and analysis is: Elwood M. Martin, Wildlife Biologist, Harvest Surveys Section, Division of Migratory Bird Management, 10815 Loblolly Pine Drive, Laurel, MD 20708-4028 (301/497-5980).